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W.J. Bennett, Jr.

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An intensive cultural resources survey was conducted within approximately 91 acres at the Walnut Bend levee project area, Lee Co., AR. Three separate parcels of land to be impacted by impending levee repair work were examined. Field examination determined that the area had been heavily modified by the original levee construction. No cultural resources have been found and none were located during field work. No further archaeological investigations were recommended.

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An Intensive Cultural Resources Survey
at
Walnut Bend Levee,
Lee County, Arkansas

by

W. J. Bennett, Jr.

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ABSTRACT

An intensive cultural resources survey was conducted within approximately 91 acres at the Walnut Bend levee project area, Lee County, Arkansas. Three separate parcels of land to be impacted by pending levee repair work were examined. Field examination determined that the area had been heavily modified by the original levee construction. No cultural resources have been previously recorded for the project area and none were located during field work. No further archeological investigations were recommended.

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An Intensive Cultural Resources Survey
at
Walnut Bend Levee,
Lee County, Arkansas

INTRODUCTION

Project Background

Construction work has been proposed for portions of a levee near Walnut Bend in Lee County, Arkansas. This will include work to the levee itself and will require the acquisition of borrow material from the vicinity. As part of its cultural resource management program the US Army Corps of Engineers, Memphis District, contracted with Archeological Assessments, Inc., Nashville, Arkansas, to perform an intensive cultural resources survey in those areas to be impacted by this undertaking.

This work was done under the authority of and in compliance with the National Environmental Policy Act of 1969 (Public Law 91-190), the National Historic Preservation Act of 1966 (Public Law 89-665), Executive Order 11593 (Protection and Enhancement of the Cultural Environment), the Archeological and Historic Preservation Act of 1974 (Public Law 93-291) and other authorities.

Work was authorized by Purchase Order Number DACW66-84-M-1172.

Project Area Location and Description

The project area contains approximately 91 acres and consists of three separate parcels of land; two possible borrow sites and the area of repairs. These parcels are located in the central portion of Section 4, and the southwest quarter of Section 5, Range 5 East, Township 1 North in eastern Lee County, Arkansas (Figure 1). The project area is situated in the Mississippi River Embayment (Haley 1976) within the latest of the meander belts mapped by Saucier (1974).

Soils in the area are composed of the Sharkey-Newellton-Tunica association which consists of slack-water flats broken by undulating areas of alternating swales and low ridges. Also included are units mapped as Fluvaquents which are slack-water deposits in borrow pit areas (Gray 1977).

Vegetation in this area has been heavily modified by farming and construction activities.

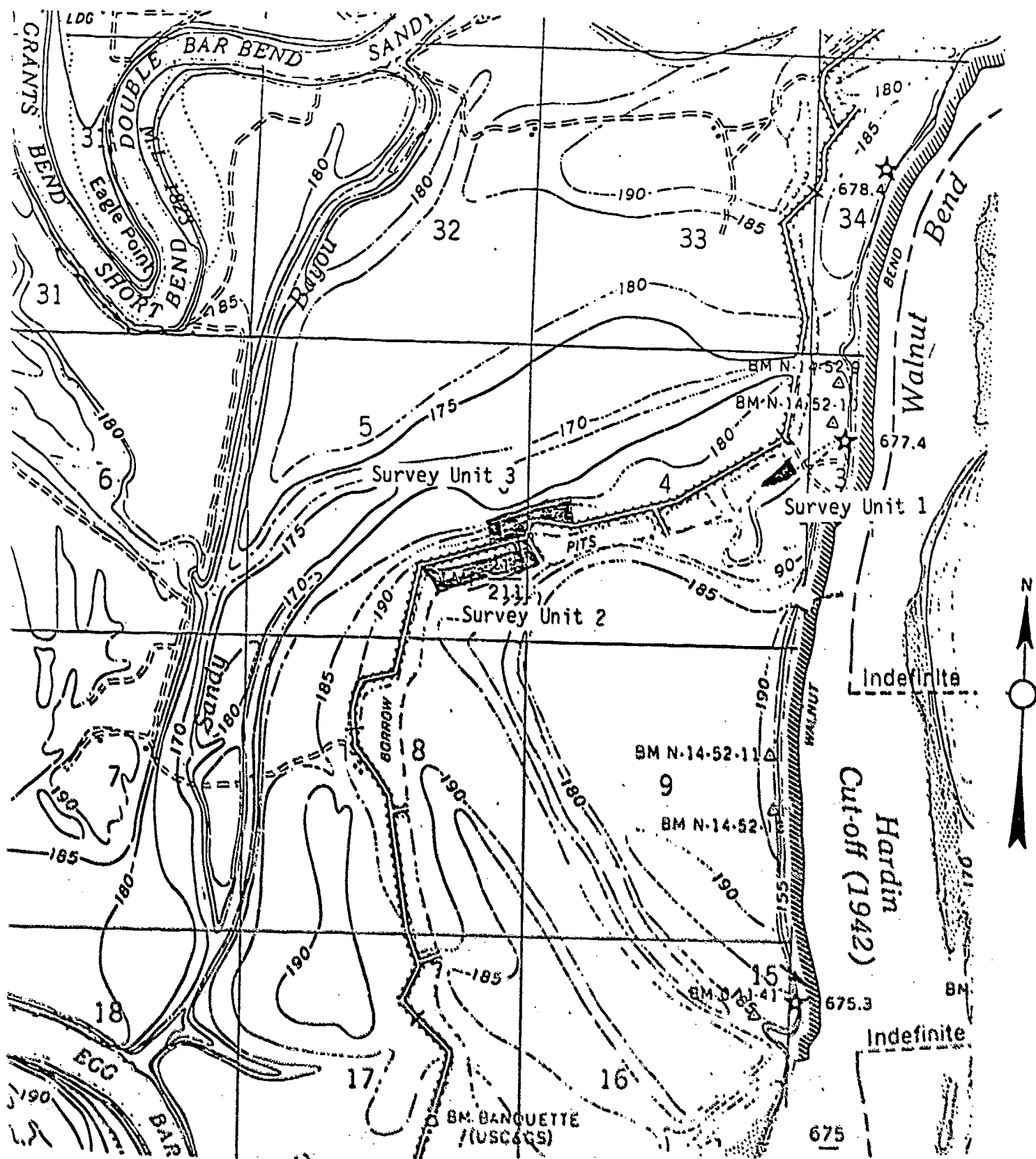


Figure 1. Location of Project Area. Map Source: USGS Quadrangle Sheet Latour Sheet, 15 Minute. Scale 5.5cm = 1 mile



INVESTIGATIONS

Background Research

Previous research in the region has determined that human occupation of the area extends back at least 12,000 years. Paleo-Indian, Archaic, Woodland, Mississippian, and Historic period sites are known for the Mississippi River Embayment region. However, because of the extremely dynamic geomorphological processes at work in the project area it was not expected that sites earlier in time than the Woodland period would have surface manifestations within the project area. This expectation, however, did not influence the use of field examination strategies or tactics.

Prior to field work the Arkansas Archeological Survey was asked to perform a records check to determine if sites had been previously recorded in the area. The results of this inquiry were negative.

No properties listed on the National Register of Historic Places are located within the project area.

Field Work

Field work was conducted on October 3, 1984, by W. J. Bennett, Jr. and Mary Bennett. For purposes of record keeping the area was divided into 3 Survey Units. All three were subjected to a pedestrian survey with transects spaced at intervals of 25m or less. Shovel testing (30cm in diameter) was conducted at 25m intervals along the transects except in Survey Units 3 where the ground surface was clear. Figure 2 illustrates the location of the Survey Units and the transects used to examine them.

Survey Unit 1 was covered in weeds, many over head high. Visibility within the Unit was almost entirely less than 10%. Shovel testing in the Unit revealed a homogeneous soil profile of light to dark brown silty loam to a depth of 40 cm. The northern edge of the Unit bordered of what seems to be an old borrow area. South of the Unit the ground surface had been cleared of vegetation and was in a construction site. Approximately 30 shovel tests were made in this Survey Unit evenly spaced along the transect lines shown in Figure 2.

Survey Unit 2 consisted of an area which had been extensively modified by borrow activities. The removal of borrow to a depth of three meters was observed throughout the Unit. The northern portion of the Unit was in a small hardwood forest-type area. The southern portion was grown over in weeds and scrub brush. A few areas had been cleared by recent brush cutting activities.

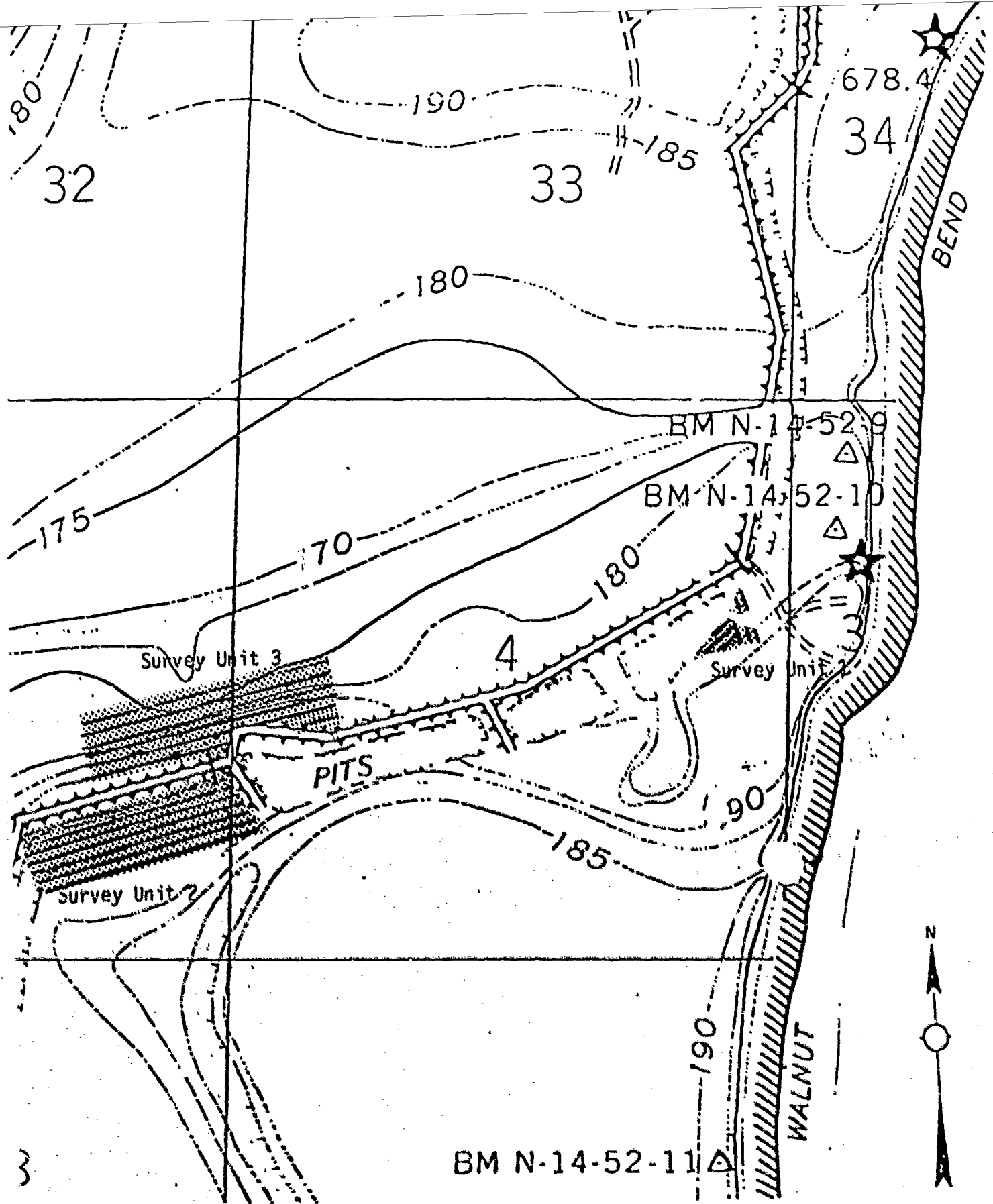


Figure 2. Location of Survey Units. Dark lines indicate orientation and placement of pedestrian transects. Map Source: USGS Quadrangle Sheet, Latour Sheet 15 Minute. Scale 11cm = 1 mile.

Approximately 100 shovel tests were made in this Survey Unit. These were evenly spaced along the transect lines shown in Figure 2. Soil profiles in the area consisted of two types, a dark brown clay to approximately 20 cm and a light brown sandy unit to about 40 cm. These reflect the alternating ridges and swales of the soil association.

Survey Unit 3 was in cultivation. About 20% of the area had been recently plowed and the ground was entirely visible. The remainder of the area was in soybeans ranging from knee to waist high. Overall ground visibility was over 80% for this Unit. Approximately 25 shovel tests were made in this Survey Unit. These were randomly spaced along the transect lines shown in Figure 2. The soil was a uniform very dark brown clay to about 20 cm.

Field impressions including the arcuate geometry of the depression and the very dark brown clay of the soil which is homogeneous to a depth of 20 cm throughout this Survey Unit suggest that this is an old river channel. The Latour Quadrangle sheet and aerial photographs (Gray 1977: Sheet 41) illustrate a presently intermittent stream along the center of the arcuate depression at about the 170 foot contour line (Figure 1).

Results

Judging from the natural setting and the recent land modifications it is highly unlikely that cultural resources exist in the project area. None were encountered during field work.

RECOMMENDATIONS

No further archeological investigations are recommended for the project area.

REFERENCES CITED

Gray, James L.

- 1977 Soil Survey of Lee County, Arkansas. United States Department of Agriculture, Soil Conservation Service and Forest Service, in cooperation with the Arkansas Agricultural Experiment Station. Washington, D. C.

Haley, Boyd

- 1976 Geologic Map of Arkansas. Arkansas Geological Commission and the United States Geological Survey.

Saucier, Roger T.

- 1974 Quaternary Geology of the Lower Mississippi Valley. Arkansas Archeological Survey, Research Series No. 6. Fayetteville

SECTION C
(SCOPE OF WORK)

Cultural Resource Literature Search and Intensive Survey
at Walnut Bend Levee, Lee County, Arkansas.

C-1. GENERAL.

C-1.1. The Contractor shall conduct a background and literature search, an intensive survey investigation, and initial site testing along Walnut Bend Levee, Lee County, Arkansas. Reports of this investigation shall be submitted. These tasks are in partial fulfillment of the Memphis District's obligations under the National Historic Preservation Act of 1966 (P.L. 89-665), as amended; the National Environmental Policy Act of 1969 (P.L. 91-190); Executive Order 11593, "Protection and Enhancement of Cultural Environment," 13 May 1971 (36 F.R. 3921); Preservation of Historic and Archaeological Data, 1974 (P.L. 93-291), as amended; and the Advisory Council on Historic Preservation, "Procedures for the Protection of Historic and Cultural Properties" (36 CFR Part 800).

C-1.2. Personnel Standards.

a. The Contractor shall utilize a systematic, interdisciplinary approach to conduct the study. Specialized knowledge and skills will be used during the course of the study to include expertise in archeology, history, architecture, geology and other disciplines as required to adequately locate and evaluate cultural resources as required in this Scope of Work.

Techniques and methodologies used for the study shall be representative of the state of current professional knowledge and development.

b. The following minimal experiential and academic standards shall apply to personnel involved in investigations described in this Scope of Work:

(1) Archeological Project Directors or Principal Investigator(s) (PI).

Individuals in charge of an archeological project or research investigation contract, in addition to meeting the appropriate standards for archeologist, must have a publication record that demonstrates extensive experience in successful field project formulation, execution and technical monograph reporting. It is mandatory that at least one individual acting as Principal Investigator or Project Director under this contract have prior experience as Principal Investigator or Project Director in cultural resources or archeological research in the Arkansas Region. Extensive prior research experience as Principal Investigator or Project Director in immediately adjacent areas of Tennessee, Missouri and Mississippi will also satisfy this requirement. The Contracting Officer may require suitable professional references to obtain estimates regarding the adequacy of prior work.

(2) Archeologist. The minimum formal qualifications for individuals practicing archeology as a profession are a B.A. or B.S. degree from an accredited college or university, followed by a minimum of two years of successful graduate study with concentration in anthropology and specialization in archeology and at least two summer field schools or their

equivalent under the supervision of archeologists of recognized competence. A Master's thesis or its equivalent in research and publication is highly recommended, as is the M.A. degree.

(3) Architectural Historian. The minimum professional qualifications in architectural history are a graduate degree in architectural history, historic preservation, or closely related fields, with course work in American architectural history; or a bachelor's degree in architectural history, historic preservation, or closely related field plus one of the following:

(a) At least two years full-time experience in research, writing, or teaching in American history or restoration architecture with an academic institution, historical organization or agency, museum, or other professional institution; or

(b) Substantial contribution through research and publication to the body of scholarly knowledge in the field of American architectural history.

(4) Other Professional Personnel. All non-archeological personnel utilized for their special knowledge and expertise must have a B.A. or B.S. degree from an accredited college or university, followed by a minimum of one year of successful graduate study with concentration in appropriate study.

(5) Other Supervisory Personnel. Persons in any archeological supervisory position must hold a B.A., B.S. or M.A. degree with a

concentration in archeology and a minimum of two years of field and laboratory experience in tasks similar to those to be performed under this contract.

(6) Crew Members and Lab Workers. All crew members and lab workers must have prior experience compatible with the tasks to be performed under this contract. An academic background in archeology/anthropology is highly recommended.

c. All operations shall be conducted under the supervision of qualified professionals in the discipline appropriate to the data that is to be discovered, described or analyzed. Vitae of personnel involved in project activities may be required by the Contracting Officer at anytime during the period of service of this contract.

C-1.3. The Contractor shall designate in writing the name of the Principal Investigator(s). Participation time of the Principal Investigator(s) shall average a minimum of 50 hours per month during the period of service of this contract. In the event of controversy or court challenge, the Principal Investigator shall be available to testify with respect to report findings. The additional services and expenses would be at Government expense, per paragraph C-1.9 below.

C-1.4. The Contractor shall keep standard field records which may be reviewed by the Contracting Officer. These records shall include field notes, appropriate state site survey forms and any other cultural resource forms and/or records, field maps and photographs necessary to successfully implement requirements of this Scope of Work.

C-1.5. To conduct the field investigation, the Contractor will obtain all necessary permits, licenses, and approvals from all local, state and Federal authorities. Should it become necessary in the performance of the work and services of the Contractor to secure the right of ingress and egress to perform any of the work required herein on properties not owned or controlled by the Government, the Contractor shall secure the consent of the owner, his representative, or agent, prior to effecting entry or performing work on such property.

C-1.6. Innovative approaches to data location, collection, description and analysis, consistent with other provisions of this contract and the cultural resources requirements of the Government, are encouraged.

C-1.7. No mechanical power equipment shall be utilized in any cultural resource activity without specific permission of the Contracting Officer.

C-1.8. The Contractor shall furnish expert personnel to attend conferences and furnish testimony in any judicial proceedings involving the archeological and historical study, evaluation, analysis and report. When required, arrangements for these services and payment therefor will be made by representatives of either the Corps of Engineers or the Department of Justice.

C-1.9. The Contractor, prior to the acceptance of the final report, shall not release any sketch, photograph, report or other material of any nature obtained or prepared under this contract without specific written approval of the Contracting Officer.

C-1.10. The extent and character of the work to be accomplished by the Contractor shall be subject to the general supervision, direction, control and approval of the Contracting Officer. The Contracting Officer may have a representative of the Government present during any or all phases of the described cultural resource project.

C-1.11. The Contractor shall obtain Corps of Engineers Safety Manual (EM385-1-1) and comply with all appropriate provisions. Particular attention is directed to safety requirements relating to the deep excavation of soils.

C-1.12. There will be two categories of meetings between Contractor and Contracting Officer: (1) scheduled formal conferences to review contract performance, and (2) informal, unscheduled meetings for clarification, assistance, coordination and discussion. The initial meeting shall be held prior to the beginning of field work. Category (1) meetings will be scheduled by the Contracting Officer and will be held at the most convenient location, to be chosen by the Contracting Officer. This may sometimes be on the project site, but generally will be at the office of the Contracting Officer.

C-2. STUDY AREA.

The study area consists of approximately 91 acres located in Lee County, Arkansas. The right-of-way extends from Station 209/42+20 to 210/5+00 landside of the levee and 600 feet (182.88 meters) landward of the berm edge (see attached blue line). Two possible borrow areas river side of the levee are to be surveyed (see attached blue lines). The project can be located on

the latour Arkansas-Mississippi, 15 minute Quadrangle map, TIN, R5E, Sec. 4 center.

C-3. DEFINITIONS.

C-3.1. "Cultural Resources" are defined to include any buildings, site, district, structure, object, data, or other material relating to the history, architecture, archeology, or culture of an area.

C-3.2. "Background and Literature Search" is defined as a comprehensive examination of existing literature and records for the purpose of inferring the potential presence and character of cultural resources in the study area. The examination may also serve as collateral information to field data in evaluating the eligibility of cultural resources for inclusion in the National Register of Historic Places or in ameliorating losses of significant data in such resources.

C-3.3. "Intensive Survey" is defined as a comprehensive, systematic, and detailed on-the-ground survey of an area, of sufficient intensity to determine the number, types, extent and distribution of cultural resources present and their relationship to project features.

C-3.4. "Mitigation" is defined as the amelioration of losses of significant prehistoric, historic, or architectural resources which will be accomplished through preplanned actions to avoid, preserve, protect, or minimize adverse effect upon such resources or to recover a representative sample of the data they contain by implementation of scientific research and other professional

techniques and procedures. Mitigation of losses of cultural resources includes, but is not limited to, such measures as: (1) recovery and preservation of an adequate sample of archeological data to allow for analysis and published interpretation of the cultural and environmental conditions prevailing at the time(s) the area was utilized by man; (2) recording, through architectural quality photographs and/or measured drawings of buildings, structures, districts, sites and objects and deposition of such documentation in the Library of Congress as a part of the National Architectural and Engineering Record; (3) relocation of buildings, structures and objects; (4) modification of plans or authorized projects to provide for preservation of resources in place; (5) reduction or elimination of impacts by engineering solutions to avoid mechanical effects of wave wash, scour, sedimentation and related processes and the effects of saturation.

C-3.5. "Reconnaissance" is defined as an on-the-ground examination of selected portions of the study area, and related analysis adequate to assess the general nature of resources in the overall study area and the probable impact on resources of alternate plans under consideration. Normally reconnaissance will involve the intensive examination of not more than 15 percent of the total proposed impact area.

C-3.6. "Significance" is attributable to those cultural resources of historical, architectural, or archeological value when such properties are included in or have been determined by the Secretary of the Interior to be eligible for inclusion in the National Register of Historic Places after evaluation against the criteria contained in 36 CFR 63.

C-3.7. "Testing" is defined as the systematic removal of the scientific, prehistoric, historic, and/or archeological data that provide an archeological or architectural property with its research or data value. Testing may include controlled surface survey, shovel testing, profiling, and limited subsurface test excavations of the properties to be affected for purposes of research planning, the development of specific plans for research activities and excavation, preparation of notes and records, and other forms of physical removal of data and the analysis of such data and material, preparation of reports on such data and material and dissemination of reports and other products of the research. Subsurface testing shall not proceed to the level of mitigation.

C-3.8. "Analysis" is the systematic examination of material data, environmental data, ethnographic data, written records, or other data which may be prerequisite to adequately evaluating those qualities of cultural loci which contribute to their significance.

C-4. SEVERAL PERFORMANCE SPECIFICATIONS.

C-4.1. Research Design.

Survey and testing will be conducted within the framework of a regional research design for prehistoric and historic resources, which should consider problems of settlement and subsistence and the relationship between the environment and various cultural systems. The research design shall appear in the report of investigations. In view of the relative sparsity of existing information on many classes of cultural resources data, it is not

expected that this research design will contain highly refined models. On the contrary, it is expected that the design will be modified and refined as data are accumulated.

C-4.2 Background and Literature Search.

a. This task shall include an examination of the historic and prehistoric environmental setting and cultural background of the study area and shall be of sufficient magnitude to achieve a detailed understanding of the overall cultural and environmental context of the study area. It is axiomatic that the background and literature search shall normally precede the initiation of all other fieldwork.

b. Information and data for the literature search shall be obtained, as appropriate, from the following sources: (1) Scholarly reports - books, journals, theses, dissertations and unpublished papers; (2) Official Records- Federal, state, county and local levels, property deeds, public works and other regulatory department records and maps; (3) Libraries and Museums - both regional and local libraries, historical societies, universities, and museums; (4) Other repositories - such as private collections, papers, photographs, etc.; (5) archeological site files at local universities, the State Historic Preservation Office, the office of the State Archeologist; (6) Consultation with qualified professionals familiar with the cultural resources in the area, as well as consultation with professionals in associated areas such as history, sedimentology, geomorphology, agronomy, and ethnology.

c. The Contractor shall include as an appendix to the draft and final reports written evidence of all consultation and any subsequent response(s), including the dates of such consultation and communications.

d. The background and literature search shall be performed in such a manner as to facilitate the construction of predictive statements (to be included in the study report) concerning the probable quantity, character, and distribution of cultural resources within the project area. In addition, information obtained in the background and literature search should be of such scope and detail as to serve as an adequate data base for subsequent field work and analysis in the study area undertaken for the purpose of discerning the character, distribution and significance of specific identified cultural resources.

e. In order to accomplish the objectives described in paragraph C-4.2.4, it will be necessary to attempt to establish a relationship between landforms and the patterns of their utilization by successive groups of human inhabitants. This task should involve defining and describing various zones of the study area with specific reference to such variables as past topography, potential food resources, soils, geology, and river channel history.

C-4.3. Intensive Survey.

a. Intensive Survey shall include the on-the-ground examination of the project areas described in paragraph C-2.

b. Unless excellent ground visibility and other conditions conducive to the observation of cultural evidence occurs, shovel test pits, or comparable subsurface excavation units, shall be installed at intervals no greater than 30 meters throughout the study area. Note that auger samples, probes, and coring tools will not be considered comparable subsurface units. Shovel test pits shall be minimally 30 x 30 centimeters in size and extend to a minimum depth of 50 centimeters. Unit fill material shall be screened using 1/4" mesh hardware cloth. Additional shovel test pits shall be excavated in areas judged by the Principal Investigator to display a high potential for the presence of cultural resources. If, during the course of intensive survey activities, areas are encountered in which disturbance or other factors clearly and decisively preclude the possible presence of significant cultural resources, the Contractor shall carefully examine and document the nature and extent of the factors and then proceed with survey activities in the remainder of the study area. Documentation and justification of such action shall appear in the survey report. The location of all shovel test units and surface observations shall be recorded.

c. When cultural remains are encountered, horizontal site boundaries shall be derived by the use of surface observation procedures (including controlled surface collection procedures described in Paragraph C-4.4.a below) in such a manner as to allow precise location of site boundaries on Government project drawings and 7.5 minute U.S.G.S. quad maps when available. Methods used to establish site boundaries shall be discussed in the survey report together with the probable accuracy of the boundaries. The Contractor shall establish a datum at the discovered cultural loci which shall be precisely related to the site boundaries as well as to a permanent reference

point (in terms of azimuth and distance) by means of a transit level. If possible, the permanent reference point used shall appear on Government blue-line (project) drawings and/or 7.5 minute U.S.G.S. quad maps. If no permanent landmark is available, a permanent datum shall be established in a secure location for use as a reference point. The permanent datum shall be precisely plotted and shown on U.S.G.S. quad maps and project drawings. All descriptions of site location shall refer to the location of the primary site datum.

d. All standing buildings and structures (excluding vehicular bridges) shall be recorded and described. For a building to be considered "standing" it must retain four walls and at least a skeletal roof structure. A building or structure found in the field to be partially or totally collapsed will be considered an archeological site. In these cases, data concerning construction materials and techniques and floor plan, if discernable, must be collected. The Contractor shall supply preliminary information concerning the suitability of a structure or building for relocation and restoration (structural soundness for example).

C-4.4. Testing Activities.

a. Initial Site Testing

(1) Surface collection of the site area shall be accomplished in order to obtain data representative of total site surface content. Both historic and prehistoric items shall be collected. The Contractor shall carefully note and record descriptions of surface conditions of the site including

ground cover and the suitability of soil surfaces for detecting cultural items (ex: recent rainfall, standing water or mud). If ground surfaces are not highly conducive to surface collection, screened shovel tests units shall be used to augment surface collection procedures. It should be noted, however, that such units should be substituted for total surface collection only where the presence of ground cover requires such techniques.

(2) Care should be taken to avoid bias in collecting certain classes of data or artifact types to the exclusion of others (ex: debitage or faunal remains) so as to insure that collections accurately reflect both the full range and the relative proportions of data classes present (ex: the proportion of debitage to implements or types of implements to each other). The selective collection of limited classes of artifacts (such as chronologically diagnostic artifacts is unacceptable). Such a collecting strategy shall require the total collection of quadrat or other sample units in sufficient quantities and adequate distribution to reasonably assure that sample data are representative of such discrete site subareas as may exist. Since the number and placement of such sample units will depend, in part, on the subjective evaluation of intrasite variability, and the amount of ground cover, the Contractor shall describe the rationale for the number and distribution of collection units. In the event that the Contractor utilizes systematic sampling procedures in obtaining representative surface samples, care should be taken to avoid periodicity in recovered data. No individual sample unit type used in surface data collection shall exceed 36 square meters in area. Unless a smaller fraction is approved by the Contracting Officer, surface collected areas shall constitute no less than 25 percent of

the total site areas. Detailed results of controlled surface collections shall be graphically depicted in plan view in the report of investigations.

(3) The Contractor shall undertake (in addition and subsequent to sample surface collecting) a general site collection in order to increase the sample size of certain classes of data which the Principal Investigator may deem prerequisite to an adequate site-specific and intersite evaluation of data.

(4) As an alternative to surface collecting procedures discussed above, where surface visibility is excellent, the Contractor may collect all visible artifacts. If such a procedure is undertaken, the precise proveniences of all individual artifacts shall be related to the primary site datum by means of a transit level.

(5) Unless it can be conclusively and definitely demonstrated that no significant subsurface cultural resources occur at a site, the Contractor shall install in each appropriate site a minimum of one 1 X 1 meter subsurface test unit to determine the presence and general nature of a subsurface deposits.

(6) Subsurface test units (other than shovel cut units) shall be excavated in levels no greater than 10 centimeters. Where cultural zonation or plow disturbance is present, however, excavated materials shall be removed by zones (and in 10 cm. levels within zones where possible). Subsurface test units shall extend to a depth of at least 20 centimeters below artifact bearing soils. A portion of each test unit, measured from one corner (of a minimum 30 X 30 centimeters), shall be excavated to a depth of 40 centimeters

below artifact bearing soils. All excavated material (including plow zone material) shall be screened using a maximum of 1/4" mesh hardware cloth. Representative profile drawings shall be made of excavated units. Subsequent to preparation of profile drawings for each test unit, the unit shall be backfilled and compacted to provide reasonable pedestrian safety.

(7) Stringent horizontal spatial control of testing shall be maintained by relating the location of all collection and test units to the primary site datum either by means of a grid system (including those used in controlled surface collection) or by azimuth and distance.

(8) Other types of subsurface units may, at the Contractor's option, be utilized in addition to those units required by this Scope of Work.

(9) Cultural Resource Recording and Numbering. For each archeological site or architectural property recorded during the survey, the Contractor shall complete and submit the standard Tennessee archeological site or architectural property survey form, respectively. The Contractor shall be responsible for reproducing or obtaining a sufficient quantity of these forms to meet the needs of the project. The Contractor shall be responsible for coordinating with the appropriate state agency to obtain state site-file numbers for each archeological site and architectural property recorded. Authorized state numbers shall be used in the draft and final reports.

b. Additional Investigations.

(1) Additional subsurface test units may be required at many loci. The proposed number and distribution of such test units shall be determined by the Principal Investigator on a site specific basis. This determination shall be made based on such variables as site size and potential intrasite variability, including physiographic and geomorphological characteristics of the loci which may suggest variability in the presence or distribution of subsurface cultural deposits. The Contractor shall detail the rationale(s) for the placement and numbers of such test units in the management summary and report of field activities. Additional reporting requirements, examination of background literature and examination of standing buildings and structures may also be required at some sites. The exact nature of additional examination, the schedule, and the price of the work shall be negotiated with the Contracting Officer, and if an agreement is reached, a Change Order shall be issued prior to conduct of the work. Additional investigations will provide a data base of sufficient nature to allow a determination of site eligibility to the National Register of Historic Places.

(2) In order to accurately relate a site to research domains, (i.e. assess significance or insignificance), a variety of data gathering techniques may be required to insure recovery of the various types of data which may be present at the site. These techniques may include but not be limited to radiocarbon dating, flotation and excavation of cultural features. When appropriate, these types of data gathering activities should be integral elements of the testing strategy.

C-4.5. Laboratory Processing, Analysis, and Preservation.

All cultural materials recovered will be cleaned and stored in deterioration resistant containers suitable for long term curation. Diagnostic artifacts, defined below, will be labeled and catalogued individually. A diagnostic artifact is defined herein as any object which contributes individually to the needs of analysis required by the research design. All other artifacts recovered must minimally be placed in labeled, deterioration resistant containers, and the items catalogued. The Contractor shall describe and analyze all cultural materials recovered in accordance with current professional standards. Artifactual and non-artifactual analysis shall be of an adequate level and nature to fulfill the requirements of this Scope of Work. All recovered cultural items shall be cataloged in a manner consistent with Arkansas state requirements. The Contractor shall consult with appropriate state officials as soon as possible following the conclusion of field work in order to obtain information (ex: accession numbers) prerequisite to such cataloging procedures.

C-4.6. Curation.

Efforts to insure the permanent curation of properly catalogued cultural resources materials in an appropriate institution shall be considered an integral part of the requirements of this Scope of Work. The Contractor shall pay all cost of the preparation and permanent curation of records and artifacts. Recovered materials and data pertaining thereto shall be curated within the state if possible. This arrangement shall be confirmed by the Contractor and the Arkansas State Historic Preservation Officer, subject to

the approval of the Contracting Officer, prior to the acceptance of the final report.

C-5. GENERAL REPORT REQUIREMENTS.

C-5.1. The primary purpose of the cultural resources report is to serve as a planning tool which aids the Government in meeting its obligations to preserve and protect our cultural heritage. The report shall be in the form of a comprehensive, scholarly document that not only fulfills mandated legal requirements but also serves as a scientific reference for future cultural resources studies. As such, the report's content must be not only descriptive but also analytic in nature.

C-5.2. Upon completion of all field investigation and research, the Contractor shall prepare a report detailing the work accomplished, the results and recommendations for each project area. Copies of the draft and final reports of investigations shall be submitted in a form suitable for publication and be prepared in a format reflecting contemporary organizational and illustrative standards for current professional archeological journals. The final report shall be typed on standard size 8-1/2" x 11" bond paper with pages numbered and with page margins one inch at top, bottom, and sides. Photographs, plans, maps, drawings and text shall be clean and clear.

C-5.3. The report shall include, but not necessarily be limited to, the following sections and items:

a. Title Page. The title page shall provide the following information; the type of task undertaken, the cultural resources which were assessed (archeological, historical, architectural); the project name and location (county and state), the date of the report; the Contractor's name; the contract number; the name of the author(s) and/or the Principal Investigator; and the agency for which the report is being prepared. If a report has been authored by someone other than the contract Principal Investigator, the Principal Investigator must at least prepare a foreword describing the overall research context of the report, the significance of the work, and any other related background circumstances relating to the manner in which the work was undertaken.

b. Abstract. An abstract suitable for publication in an abstract journal shall be prepared and shall consist of a brief, quotable summary useful for informing the technically-oriented professional public of what the author considers to be the contributions of the investigation to knowledge.

c. Table of Contents.

d. Introduction. This section shall include the purpose of the report, a description of the proposed project, a map of the general area, a project map, and the dates during which the task was conducted. The introduction shall also contain the name of the institution where recovered materials will be curated.

e. Environmental Context. This section shall contain, but not be limited to, a discussion of probable past floral and faunal characteristics

of the project area. Since data in this section will be used in the evaluation of specific cultural resource significance, it is imperative that the quantity and quality of environmental data be sufficient to allow subsequent detailed analysis of the relationship between past cultural activities and environmental variables.

f. Previous Research. This section shall describe previous research which may be useful in deriving or interpreting relevant background research data, problem domains, or research questions and in providing a context in which to examine the probability of occurrence and significance of cultural resources in the study area.

g. Literature Search and Personal Interviews. This section shall discuss the results of the literature search, including specific data sources, and personal interviews conducted during the course of investigations.

h. Survey, Testing and Analytical Methods. This section shall contain an explicit discussion of the research design, and shall demonstrate how environmental data, previous research data, the literature search and personal interviews have been utilized in constructing the strategy. Specific research domains and questions as well as methodological strategies employed to address those questions should be included where possible.

i. Survey, Testing and Analytical Results. This section shall discuss archeological, architectural, and historical resources surveyed, tested and analyzed, the nature and results of analysis, and the scientific importance

or significance of the work. Quantified listings and descriptions of artifacts and their proveniences shall be included in this section or added to the report as an appendix. Inventoried sites shall include a site number.

j. Recommendations.

(1) This section shall contain assessments of the eligibility of specific cultural properties in the study area for inclusion in the National Register of Historic Places.

(2) Significance shall be discussed explicitly in terms of previous regional and local research and relevant problem domains. Statements concerning significance shall contain a detailed, well-reasoned argument for the property's research potential in contributing to the understanding of cultural patterns, processes or activities important to the history or prehistory of the Locality, Region or nation, or other criteria of significance. Conclusions concerning insignificance, likewise, shall be fully documented and contain detailed and well-reasoned arguments as to why the property fails to display adequate research potential or other characteristics adequate to meet National Register criteria of significance. For example, conclusions concerning significance or insignificance relating solely to the lack of contextual integrity due to plow disturbance or the lack of subsurface deposits will be considered inadequate. Where appropriate, due consideration should be given to the data potential of such variables as site functional characteristics, horizontal intersite or intrasite spatial patterning of data and the importance of the site as a

representative systemic element in cultural patterning. The Contractor should be guided, in this regard, by Archeological Property Nominations by Tom King (Published in 11593, Vol. 1, No. 2). All report conclusions and recommendations shall be logically and explicitly derived from data discussed in the report.

(3) The significance or insignificance of cultural resources can be determined adequately only within the context of the most recent available local and regional data base. Consequently, the evaluation of specific individual cultural loci examined during the course of contract activities shall relate those resources not only to previously known cultural data but also to a synthesized corpus of data including that generated in the present study.

(4) The Contractor shall provide appropriate alternative mitigation measures for significant resources which will be adversely impacted. Data will be provided to support the need for mitigation, and the relative merits of each mitigation design will be discussed. Preservation of significant cultural resources is nearly always considered preferable to recovery of data through excavation. When a significant site can be preserved for a cost reasonably comparable to, or less than the cost required to recover the data, full consideration shall be given to this course of action.

k. References (American Antiquity style).

l. Appendices (Maps, correspondence, etc). A copy of this Scope of Work shall be included as an appendix to the report of investigations.

C-5.4. The above items do not necessarily have to be discrete sections; however, they should be readily discernable to the reader.

C-5.5. In order to prevent potential damage to cultural resources, no information shall appear in the body of the report which would reveal precise resource location. All maps which indicate or imply precise site locations shall be included in reports as a readily removable appendix (ex: envelope).

C-5.6. No logo or other such organizational designation shall appear in any part of the report (including tables or figures) other than the title page.

C-5.7. Unless specifically excluded by the Contracting Officer, all reports shall utilize permanent site numbers assigned by the state of Tennessee.

C-5.8. All appropriate information (including typologies and other classificatory units) not generated in these contract activities shall be suitably referenced.

C-5.9. Reports shall contain site specific maps. Site maps shall indicate site datum(s), location of data collection units (including shovel cuts, subsurface test units, and surface collection units), site boundaries in relation to proposed project activities, site grid systems (where appropriate), and such other items as the Contractor may deem appropriate to the purposes of this contract.

C-5.10. Information shall be presented in textual, tabular, and graphic forms, whichever are most appropriate, effective and advantageous to

communicate necessary information. All tables, figures and maps appearing in the report shall be of publishable quality.

C-5.11. Any abbreviated phrases used in the text shall be spelled out when the phrase first occurs in the text. For example use "State Historic Preservation Officer (SHPO)" in the initial reference and thereafter "SHPO" may be used.

C-5.12. The first time the common name of a biological species is used it should be followed by the scientific name.

C-5.13. In addition to street addresses or property names, sites shall be located on the Universal Transverse Mercator (UTM) grid.

C-5.14. All measurements should be metric.

C-5.15. As appropriate, diagnostic and/or unique artifacts, cultural resources or their contexts shall be shown by drawings or photographs.

C-5.16. Black and white photographs are preferred except when color changes are important for understanding the data being presented. No instant type photographs shall be used.

C-5.17. Negatives of all black and white photographs and/or color slides of all plates included in the final report shall be submitted to the Contracting Officer.

C-6. SUBMITTALS.

C-6.1. The Contractor shall submit 4 copies of the draft report and one unbound original and 15 bound copies of the final report which include appropriate revisions in response to the Contracting Officer's comments.

C-6.2. The Contractor shall submit under separate cover 3 copies of appropriate 15' quadrangle maps (7.5' when available) or other site drawings which show exact boundaries of all cultural resources within the project area and their relationship to project features, and single copies of all forms, records and photographs described in paragraph C-1.5. If cultural resources are not found, separate topographic maps need not be submitted.

C-6.3. The Contractor shall submit to the Contracting Officer completed National Register forms including photographs, maps, and drawings in accordance with the National Register Program, if any sites inventoried during the survey are found to meet the criteria of eligibility for nomination and for determination of significance. The completed National Register forms shall be submitted with the final report.

C-6.4. At any time during the period of service of this contract and upon the written request of the Contracting Officer, the Contractor shall submit, within 30 calendar days, any portion or all field records described in paragraph C-1.5. without additional cost to the Government.

C-6.5. When cultural resources are located during intensive survey activities, the Contractor shall supply the appropriate State Historic

Preservation Office and the Contracting Officer with completed site forms, survey report summary sheets, maps or other forms as appropriate. Blank forms may be obtained from the State Historic Preservation Office. Copies of such completed forms and maps shall be submitted to the Contracting Officer within 30 calendar days of the end of field work.

C-6.6. The Contractor shall prepare and submit with the final report, a site card for each identified resource or aggregate resource. These site cards do not replace state approved prehistoric, historic, or architectural forms or Contractor designed forms. These 5 X 8 inch cards shall be color-coded. White cards shall be used for prehistoric sites, blue cards for historic sites, green for architectural sites, and yellow cards for potentially significant sites. Sites fitting two or more categories shall have two or more appropriate cards. This site card shall contain the following information, to the degree permitted by the type of study authorized:

a. Site number

b. Site name

c. Location: section, township, and UTM coordinates (for procedures in determining UTM coordinates, refer to How to Complete National Register Forms, National Register Program, Volume 2.

d. County and state

e. Quad maps

f. Date of record

g. Description of site

h. Condition of site

i. Test excavation results

j. Typical artifacts

k. Chronological position (if known)

l. Relation to project

m. Previous studies and present contract number

n. Additional remarks

C-6.7. Documentation. The Contractor shall submit detailed monthly progress reports to the Contracting Officer by the 7th day of every month for the duration of the contract. These reports will contain an accurate account of all field work, laboratory procedures and results in sufficient detail to allow monitoring of project progress. Two different 35mm color slides

illustrating aspects of the investigation will be submitted with each monthly report.

C-7. SCHEDULE.

C-7.1. The Contractor shall, unless delayed due to causes beyond his control and without his fault or negligence, complete all work and services under this contract within the following time limitations.

<u>Activity</u>	<u>Completion Time</u> (In days beginning with acknowledged date of receipt of notice to proceed)
Survey/Initial Testing	3
Submittal of Draft Report of Investigations	18
Submittal of Final Report of Investigations	27

C-7.2. The Contractor shall make any required corrections after review by the Contracting Officer. The Contracting Officer may defer Government review comments pending receipt of review comments from the State Historic Preservation Officer or other reviewing agencies. More than one series of draft report corrections may be required. In the event that the Government review period (20 days) is exceeded and upon request of the Contractor, the

contract period will be extended automatically on a calendar day for day basis. Such extension shall be granted at no additional cost to the Government.

C-7.3. The Contractor shall, unless delayed due to causes beyond his control and without his fault or negligence, complete all work and services under this purchase order within 27 days after receipt of notice to proceed.

C-8. METHOD OF PAYMENT.

C-8.1. Upon satisfactory completion of work by the Contractor, in accordance with the provisions of this purchase order, and its acceptance by the Contracting Officer, the Contractor will be paid the amount of money indicated in Block 25 of the purchase order.

C-8.2. If the Contractor's work is found to be unsatisfactory and if it is determined that fault or negligence on the part of the Contractor or his employees has caused the unsatisfactory condition, the Contractor will be liable for all costs in connection with correcting the unsatisfactory work. The work may be performed by Government forces or Contractor forces at the direction of the Contracting Officer. In any event, the Contractor will be held responsible for all costs required for correction of the unsatisfactory work, including payments for services, automotive expenses, equipment rental, supervision, and any other costs in connection therewith, where such unsatisfactory work as deemed by the Contracting Officer to be the results of carelessness, incompetent performance or negligence by the Contractor's

employees. The Contractor will not be held liable for any work or type of work not covered by this purchase order.

C-8.3. Prior to settlement upon termination of the purchase order, and as a condition precedent thereto, the Contractor shall execute and deliver to the Contracting Officer a release of all claims against the Government arising under or by virtue of the purchase order, other than such claims, if any, as may be specifically excepted by the Contractor from the operation of the release in stated amounts to be set forth therein.